

New and noteworthy records and new synonyms in pottiaceous mosses, mostly from SE Asia

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Abstract. New country records and range extensions for several pottiaceous mosses, mostly from S.E. Asia, are reported. Thirteen new synonyms are proposed.

Recent study of pottiaceous mosses from various tropical localities, including large collections made by Dr. B.O. van Zanten in the Philippines and Australia, Queensland, yielded a number of new country records and range extensions of species. Furthermore, examination of type materials revealed several new synonyms. Type citations in this paper largely follow the recommendations of Frahm & Gradstein (1984).

Bryoerythrophyllum ferruginascens (Stirt.) Giac.

Bryoerythrophyllum ferrugineum Hampe in C. Muell. ex Gangulee, Nova Hedwigia 8: 147, tab. 21, pl. 5. 1964. *syn. nov.* Type: (India), Darjeeling, ca. 1868, Kurz 2170 (CAL, iso).

Didymodon gymnostomus Broth. in Handel-Mazzetti, Symb. Sin. 4: 39. 1929. *syn. nov.* Type: China, Yunnan, bei Bahan,

an an Lu-djian (Salwin), 24 June 1916, Handel-Mazzetti 9064 (H, holo). This new synonymy was already hinted at by Zander (1978, p. 545).

Didymodon luzonensis Bartr., Phil. J. of Sc. 68: 116, fig. 137. 1939. *syn. nov.* Type: Philippine Islands, Luzon, Mountain Prov., Mt. Santo Thomas, on rock, 23 March 1935, H.H. Bartlett 13.304 (FH, holo).

Didymodon obtusissimus Broth., Oefv. Finsk. Vet. Soc. Foerh. Bd 62: 9. 1921. *syn. nov.* Type: Japan, Hondo, Prov. Rikouku, Mt. Hakkoda, 30 July 1907, E. Iishiba 154 (H, holo; L, iso). This new synonymy was already hinted at by Zander (1978, p. 545).

A rather widespread species, mostly collected in the mountains of Asia at higher altitudes. The plant is rather inconspicuous and commonly without capsules. Sporophyte material was seen

from: Himalaya-region (India), Japan, Papua New Guinea and the Philippines. *Bryoerythrophyllum ferruginascens* seems to be rather common in Japan. Rhizoidal tubers are nearly always easy to detect. This is a rather stable species. I have seen ca. 60 collections from throughout the total range (see also Zander, 1978).

***Didymodon laevigatus* (Mitt.) Zand.**

Barbula crassicostata Bartr., Bryologist 49: 114. 1946. *syn. nov.* Type: Guatemala, Volcan Tajumulco, Dep. San Marcos, moist, shaded bluff by waterfall, 2700-3800 m., 15 Feb. 1940, J.A. Steyermark 35.695 (FH, holo); Steyermark 35.714 (FH, para).

Barbula wisselii Dix., Farlowia 1: 30-31. 1943. *syn. nov.* Type: (West Irian), Meerendal, Mt. Carstensz, 4000-4100 m., Wissel 32 p.p. (BZ 4003C), (L, iso).

Didymodon coffeatus Norris & T. Kop., Acta Bot. Fenn. 137: 124-126, fig. 14 a-g. 1989. *syn. nov.* Type: Papua New Guinea, Morobe, Head Waters of Sankwep River, Sarawaket southern range, lat. 6 21' S; 14° 07' E, 3500-3700 m., on basic cliff, 9 July 1981, T. Koponen 32.745 (H, holo); Norris 62.213 (H, para).

In total, I have seen ca. 40 collections, including about 20 from Papua New Guinea. Nearly all were collected above 3000 m. The identity of one collection (Touw 17.317 BUF, L) was kindly confirmed by R.H. Zander in 1989. *Didymodon laevigatus* is a rather stable species and probably not rare in Papua New Guinea at higher altitudes.

***Didymodon vinealis* (Brid.) Zand.**

Barbula tectorum C. Muell., Nuov. Giorn. Bot. Ital. n. ser. 3: 101. 1896. *syn. nov.*

Type: China, Prov. Schen-si, Tun-juen-fan, in tectis, 23 Oct. 1894, J. Giraldis 849 (BM, iso).

Barbula horricomis C. Muell. ex Gangulee, Nova Hedwigia 12: 423. 1966. *syn. nov.* Type: (India), below Mussoorie, 5-6000 ft, 6 Sept. 1895, J.F. Duthie s.n. (CAL, iso).

I have seen ca. 500 collections from throughout the subcosmopolitic range of the species. The types cited above represent common forms of *D. vinealis*. The material of *Barbula tectorum*, however, is unusual in having simple axillary gemmae, which are rather rare in *D. vinealis*. I fully agree with the treatment of the species by Zander (1981).

***Hymenostyliella llanosii* (Broth.) Robins.**

This species seems to be very rarely collected in S.E. Asia. It was originally described as *Hymenostyliella involuta* and long known only from the Philippines (Bartram, 1939; Chen 1941). For a detailed study of the species see Robinson (1971).

The following collections constitute new range extensions:

Papua New Guinea: Morobe Distr., Prov. Kewieng, no. 1, 4 km S. of Teptep airstrip, along trail, on soil, alt 2070-2200 m., lat. 5° 59.5'S; 146° 34'E, 27 July 1981, T. Koponen 34.497 (in *Trichostomum brachydontium*) with old setae (L). Eastern Highlands, Upper Chimbu valley, near Gembogl along Augeni River, 2100-2200 m., on earth and rocks, dry and more or less exposed, 16 Oct. 1968, B.O. van Zanten 68.2915A, with setae (GRO, hb. Sollman). Thailand: Nakhon Sawan, Langsang Nat. Park, on damp limestone rocks, alt 300 m., along stream, 18 Nov. 1965, A. Touw 8091 (L).

***Hyophila nymaniana* (Fleisch.) Menzel**

Barbula (Hydrogonium?) fusco-virens Bartr., Rev. Bryol. Lichénol. c - 23: 246. 1954. *syn. nov.* Type: Burma, Shan States, Taunggyi, along trails to Crag, 4500-5600 ft, R.D. Svihla 3359 (FH, holo); Svihla 3340 (FH, para).

Hyophila comosa Dix. & P. Varde, Arch. de Bot. 1 (8-9) Bull. Mens.: 166, pl. V, 2. 1927. *syn. nov.* Type: India, Beddome, from NY herb. Mitten, herb. Dixon, ref. no. 706 (BM, NY, S); G. Foreau 339, 382, 760(b), (BM, S, para's). Note: the original publication cites no collector, nor the herbarium of the type.

Hyophila siamensis Dix., J. Siam Soc. Nat. Hist. Suppl. Vol. X: 8. 1935. *syn. nov.* Type: Siam (Thailand), Udawn, Loi Sitan, on rock in dry streambed, ca. 200 m., 9 Feb. 1931, Kerr 564 (BM, holo); Kerr 580 (BM, para).

Hyophila tisserantii P. Varde, Rev. Bryol. Lichénol. 7: 233, fig. 4. 1935. *syn. nov.* Type: (C. African Rep.), Bozoum, sur la terre, 1 Aug. 1932, Ch. Tisserant s.n. (PC: herb. Varde no. 4536, iso).

This is a clear-cut and stable species. For a good descriptions and figures see Bartram (1939) and Eddy (1990), both as *Hyophila rosea* Williams. This species has been surprisingly little collected in S.E. Asia, except perhaps in S. India. I have seen 30 collections, from the following countries: Burma, China (Xishuangbanna region), India (Karnataka, Kodwara, Tamil Nadu distr.), Indonesia (Java), Nepal, Philippines (Luzon) and Thailand. Very recently I came across a collection from Central Africa: Zaire, Haute-Shaba, Plateau des Kibara, 3 km a l'W. du Eusinga, forêt... epiphyte, 15 April 1969, S. Lisowski 3694 (BR). Only one collection has become known to me from the Americas: Mexico, S.W. Jalisco, Arroyo de la Resolana near Los Arboles, dry granite rock, 3500 ft, 14 Aug. 1949, H.A. Crum 1291 (as *H. involuta*, c. sp.

(NY). This seems to be the first record of this species from the New World.

Pseudosymblepharis angustata (Mitt.) Chen

As far as I am aware, this species was not yet reported from Australia. Two collections from this country were recently seen, as follows: Queensland, Atherton, Great Dividing Range, summit east of Atherton, alt ca. 1250 m., on exposed bark of tall tree in (low) rainforest, 31 July 1968, B.O. van Zanten 68.1284 & 68.1289B (GRO, hb. Sollman).

Trichostomum brachydontium Br.

Only very few tropical collections were seen. Recently the following material became known to me: Indonesia, Java, Ranu bedali, on vertical wall, 11 April 1952, R. v.d. Wijk 636; Sumatra, Sikoenggang, on limestone, 27 May 1952, R. v.d. Wijk 1219; Sumatra, near Ajer Lua Pambang, behind Muko Muko, on calcareous soil, 12 June 1952, R. v.d. Wijk 1532, 1534 (GRO, L).

Trichostomum crispulum Br.

This species seems to be very rare in the tropics. The following collection was seen: Indonesia, Sumatra, Sikoenggang, on limestone, 27 May 1952, R. v.d. Wijk 1219A, with *Trichostomum brachydontium*, det. Ph. S., 1991 (L).

Weissia platyphylla (Dix.) Eddy

This species was only known from a few collections from Papua New Guinea and Queensland (Eddy, 1990; Norris & Koponen, 1989). One following new record has become known to me:

Australia, Queensland, Cairns, east of Harbour, Hill Creek area, alt 10-50 m., on half-shaded, vertical earth-wall, 21 July 1968, B.O. van Zanten 68.1044, c.sp. (GRO, hb. Sollman). A new record from the Philippines (Luzon), will be published later.

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